

# Platform Elly

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## Origin

California, USA

## Physical Properties

		Platform Elly % Evaporative Mass Loss			
		0.0%	4.6%	7.9%	13.3%
<b>Density (g/mL)</b>	5°C	0.9665	0.9793	0.9862	NM
	15°C	0.9608	0.9732	0.9801	NM
	30°C	0.9513	0.9634	0.9701	0.9843
<b>API Gravity</b>		15.7			
<b>Dynamic Viscosity (mPa•s)</b>	5°C	11377	40103	104333	167600 0
	15°C	3860	13348	34193	382333
	30°C	1070	3058	6725	52283
<b>Hydrocarbon Groups (%w/w)</b>	Saturates	34.6%	31.4%	28.8%	25.8%
	Aromatics	32.4%	32.6%	31.1%	31.5%
	Resins	19.4%	21.1%	23.7%	22.9%
	Asphaltenes	13.6%	14.9%	16.4%	19.8%
<b>Surface Tension (mN/m)</b>	5°C	NM	NM	NM	NM
	15°C	NM	NM	NM	NM
	30°C	NM	NM	NM	NM
<b>Interfacial Tension (Oil/Water, mN/m)</b>	5°C	NM	NM	NM	NM
	15°C	NM	NM	NM	NM
	30°C	NM	NM	NM	NM
<b>Interfacial Tension (Oil/33‰ Brine, mN/m)</b>	5°C	NM	NM	NM	NM
	15°C	NM	NM	NM	NM
	30°C	NM	NM	NM	NM

NM: Not Measurable

## Platform Elly

### GC-TPH Distributions

Fraction	Platform Elly Concentration (mg/g oil)			
	0% evap.	4.6% evap.	7.9% evap.	13.3% evap.
Total GC-TPH <sup>†</sup>	436	438	439	410
GC-Saturates/GC-TPH <sup>†</sup>	51.8%	48.5%	48.0%	45.1%
GC-Aromatics/GC-TPH <sup>†</sup>	48.2%	51.5%	52.0%	54.9%
Resolved Peaks/GC-TPH	13.0%	13.6%	12.2%	10.6%
GC-TPH in ranges: <sup>†</sup>				
$n\text{-C}_8\text{-} \leq \text{to} \leq n\text{-C}_{10}$	23	21.5	13.6	0.5
$n\text{-C}_{10} < \text{to} \leq n\text{-C}_{16}$	79	84.3	77.6	66.8
$n\text{-C}_{16} < \text{to} \leq n\text{-C}_{34}$	252	260	265	261
$n\text{-C}_{34} +$	81.3	72.6	82.7	81.3

<sup>†</sup>Including both resolved peaks and unresolved complex mixture areas.

### Volatile Organic Compounds

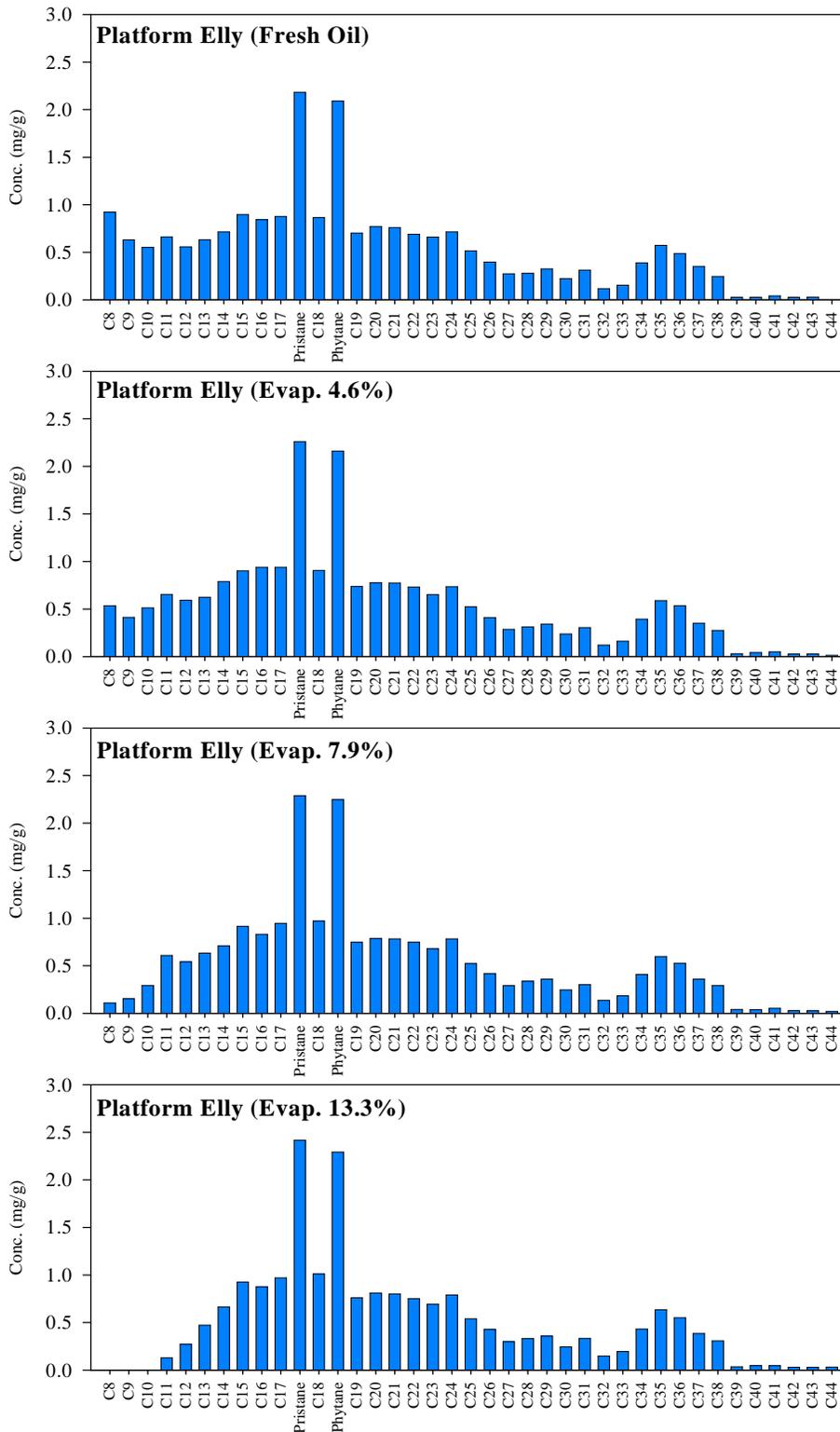
	Platform Elly Concentration (mg/g oil)			
	0% evap.	4.6% evap.	7.9% evap.	13.3% evap.
Benzene	0.16	0.05	0.00	0.00
Toluene	0.82	0.45	0.15	0.00
Ethylbenzene	0.50	0.38	0.24	0.00
<i>meta</i> - and <i>para</i> -Xylene	0.74	0.58	0.37	0.00
<i>ortho</i> -Xylene	0.55	0.45	0.30	0.00
<b>Sum BTEX</b>	<b>2.77</b>	<b>1.91</b>	<b>1.07</b>	<b>0</b>
Isopropylbenzene	0.18	0.15	0.11	0.00
Propylbenzene	0.39	0.34	0.26	0.00
3- and 4-Ethyltoluene	0.56	0.50	0.41	0.01
1,3,5-Trimethylbenzene	0.19	0.17	0.14	0.00
2-Ethyltoluene	0.35	0.32	0.27	0.01
1,2,4-Trimethylbenzene	0.53	0.49	0.43	0.03
1,2,3-Trimethylbenzene	0.14	0.13	0.12	0.01
<b>Sum C<sub>3</sub>-benzenes</b>	<b>2.34</b>	<b>2.11</b>	<b>1.74</b>	<b>0.06</b>
Isobutylbenzene	0.02	0.02	0.02	0
1-Methyl-2-isopropylbenzene	0.02	0.02	0.02	0
1,2-Dimethyl-4-ethylbenzene	0.17	0.16	0.16	0.04
Amylbenzene	0.08	0.06	0.07	0.03
n-Hexylbenzene	0.06	0.05	0.06	0.04
<b>BTEX + C<sub>3</sub>-benzenes</b>	<b>5.1</b>	<b>4.02</b>	<b>2.8</b>	<b>0.06</b>
<b>All Target BTEX and Alkyl-benzenes</b>	<b>5.46</b>	<b>4.34</b>	<b>3.12</b>	<b>0.18</b>

# Platform Elly

## *n*-Alkane Distributions

<i>n</i> -Alkane Component	Platform Elly Concentration (mg/g oil)			
	0% evap.	4.6% evap.	7.9% evap.	13.3% evap.
<i>n</i> -C <sub>8</sub>	0.92	0.53	0.11	0
<i>n</i> -C <sub>9</sub>	0.63	0.41	0.15	0
<i>n</i> -C <sub>10</sub>	0.55	0.51	0.29	0
<i>n</i> -C <sub>11</sub>	0.66	0.65	0.61	0.13
<i>n</i> -C <sub>12</sub>	0.56	0.59	0.54	0.27
<i>n</i> -C <sub>13</sub>	0.63	0.63	0.63	0.47
<i>n</i> -C <sub>14</sub>	0.72	0.79	0.71	0.66
<i>n</i> -C <sub>15</sub>	0.9	0.9	0.91	0.92
<i>n</i> -C <sub>16</sub>	0.84	0.94	0.83	0.88
<i>n</i> -C <sub>17</sub>	0.88	0.94	0.95	0.97
Pristane	2.18	2.26	2.29	2.42
<i>n</i> -C <sub>18</sub>	0.87	0.91	0.97	1.01
Phytane	2.09	2.16	2.25	2.29
<i>n</i> -C <sub>19</sub>	0.7	0.74	0.75	0.76
<i>n</i> -C <sub>20</sub>	0.77	0.78	0.79	0.81
<i>n</i> -C <sub>21</sub>	0.76	0.77	0.78	0.8
<i>n</i> -C <sub>22</sub>	0.69	0.73	0.75	0.75
<i>n</i> -C <sub>23</sub>	0.66	0.65	0.68	0.69
<i>n</i> -C <sub>24</sub>	0.71	0.73	0.78	0.79
<i>n</i> -C <sub>25</sub>	0.52	0.52	0.52	0.54
<i>n</i> -C <sub>26</sub>	0.4	0.41	0.42	0.43
<i>n</i> -C <sub>27</sub>	0.27	0.29	0.29	0.3
<i>n</i> -C <sub>28</sub>	0.28	0.31	0.34	0.33
<i>n</i> -C <sub>29</sub>	0.33	0.34	0.36	0.36
<i>n</i> -C <sub>30</sub>	0.22	0.24	0.25	0.24
<i>n</i> -C <sub>31</sub>	0.31	0.31	0.3	0.33
<i>n</i> -C <sub>32</sub>	0.12	0.12	0.14	0.15
<i>n</i> -C <sub>33</sub>	0.15	0.16	0.19	0.2
<i>n</i> -C <sub>34</sub>	0.39	0.39	0.41	0.43
<i>n</i> -C <sub>35</sub>	0.57	0.59	0.6	0.64
<i>n</i> -C <sub>36</sub>	0.49	0.54	0.53	0.55
<i>n</i> -C <sub>37</sub>	0.35	0.35	0.36	0.38
<i>n</i> -C <sub>38</sub>	0.25	0.28	0.29	0.31
<i>n</i> -C <sub>39</sub>	0.03	0.03	0.04	0.04
<i>n</i> -C <sub>40</sub>	0.03	0.04	0.04	0.05
<i>n</i> -C <sub>41</sub>	0.04	0.05	0.05	0.05
<i>n</i> -C <sub>42</sub>	0.03	0.03	0.03	0.03
<i>n</i> -C <sub>43</sub>	0.03	0.03	0.03	0.03
<i>n</i> -C <sub>44</sub>	0	0.01	0.02	0.03
<b>TOTAL</b>	<b>21.5</b>	<b>21.7</b>	<b>21.0</b>	<b>20.0</b>
C <sub>17</sub> /PRISTANE	0.4	0.42	0.41	0.4
C <sub>18</sub> /PHYTANE	0.42	0.42	0.43	0.44
PRISTANE/PHYTANE	1.05	1.05	1.02	1.05
Odd Alkanes	8.43	8.36	8.21	7.61
Even Alkanes	8.83	8.89	8.23	7.73
CPI	0.95	0.94	1	0.98

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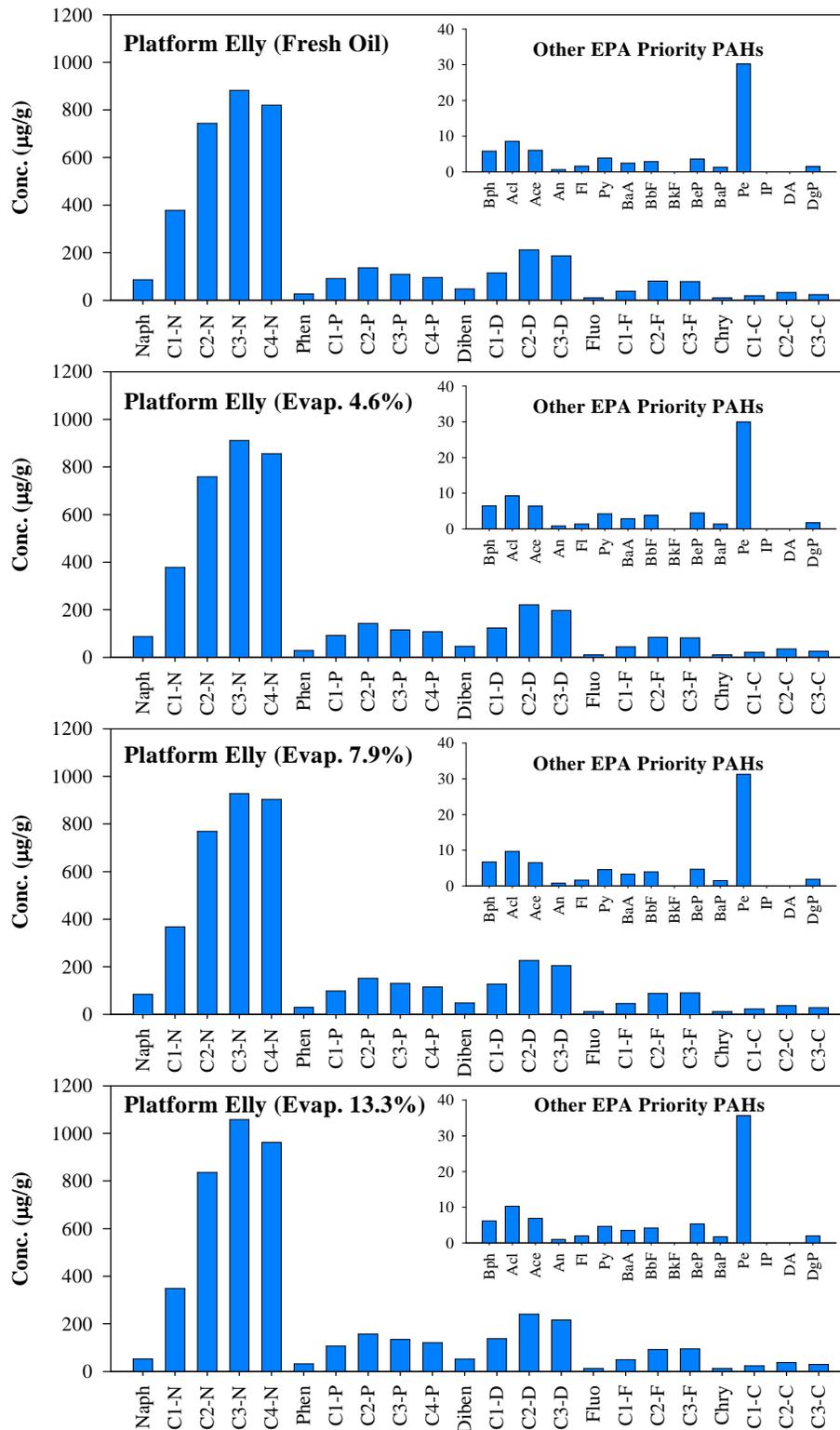
n-Alkane Distributions for Platform Elly

# Platform Ely

## PAH Distributions

		Platform Ely Concentration (µg/g oil)			
Alkylated PAHs		0% evap.	4.6% evap.	7.9% evap.	13.3% evap.
Naphthalene	C0-N	85.8	87.0	84.1	52.4
	C1-N	377	378	367	349
	C2-N	744	759	769	836
	C3-N	882	911	928	1058
	C4-N	820	856	903	962
	<b>Sum</b>	<b>2909</b>	<b>2991</b>	<b>3051</b>	<b>3258</b>
Phenanthrene	C0-P	27.3	28.5	28.9	31.5
	C1-P	91.4	92.0	97.9	106
	C2-P	137	143	151	157
	C3-P	109	116	130	135
	C4-P	95.6	108.1	115	121
	<b>Sum</b>	<b>460</b>	<b>487</b>	<b>523</b>	<b>551</b>
Dibenzothiophene	C0-D	47.4	46.4	47.7	52.1
	C1-D	115	124	127	137
	C2-D	212	221	227	241
	C3-D	187	197	205	216
	<b>Sum</b>	<b>561</b>	<b>588</b>	<b>607</b>	<b>647</b>
Fluorene	C0-F	10.2	10.9	11.9	12.5
	C1-F	38.5	44.3	46.2	49.0
	C2-F	80.5	83.5	88.2	92.2
	C3-F	78.7	82.2	90.3	95
	<b>Sum</b>	<b>208</b>	<b>221</b>	<b>237</b>	<b>248</b>
Chrysene	C0-C	10.5	11.0	11.6	12.1
	C1-C	19.7	21.2	22.9	23.9
	C2-C	33.0	34.9	36.7	37.7
	C3-C	24.4	25.8	27.8	29.2
	<b>Sum</b>	<b>87.6</b>	<b>92.8</b>	<b>99.0</b>	<b>102.9</b>
<b>Total alkylated PAHs</b>		<b>4226</b>	<b>4379</b>	<b>4516</b>	<b>4806</b>
C2-N/C1-N	1.36	1.32	1.34	1.37	
Ratios of C3-D isomers	1.00:0.71:0.67	1.00:0.71:0.68	1.00:0.70:0.67	1.00:0.71:0.66	
Ratios of C2-P isomers (C2D/C2P):(C3D/C3P)	1.00	0.98	1.00	1.01	
C0N:C1N:C2N:C3N:C4N	0.10:0.46:0.91:1.08:1.	0.10:0.44:0.89:1.07:1.	0.09:0.41:0.85:1.03:1.	0.05:0.36:0.87:1.10:1.	
∑N:∑P:∑DBT:∑F:∑C	00	00	00	00	
	6.32:1.00:1.22:0.45:0.	6.15:1.00:1.21:0.45:0.	5.83:1.00:1.16:0.45:0.	5.92:1.00:1.17:0.45:0.	
	19	19	19	19	
<b>EPA Priority PAHs</b>					
Biphenyl	5.77	6.44	6.69	6.18	
Acenaphthylene	8.56	9.24	9.66	10.2	
Acenaphthene	6.01	6.32	6.51	6.87	
Anthracene	0.60	0.82	0.78	0.96	
Fluoranthene	1.57	1.32	1.64	1.99	
Pyrene	3.81	4.20	4.53	4.61	
Benz(a)anthracene	2.43	2.81	3.30	3.48	
Benzo(b)fluoranthene	2.87	3.72	3.92	4.19	
Benzo(k)fluoranthene	0.00	0.00	0.00	0.00	
Benzo(e)pyrene	3.55	4.47	4.67	5.31	
Benzo(a)pyrene	1.32	1.36	1.46	1.75	
Perylene	30.2	29.9	31.2	35.7	
Indeno(1,2,3cd)pyrene	0.00	0.00	0.00	0.00	
Dibenzo(a,h)anthracene	0.00	0.00	0.00	0.00	
Benzo(ghi)perylene	1.48	1.65	1.87	1.99	
<b>Total EPA Priority PAHs</b>	<b>68.1</b>	<b>72.2</b>	<b>76.2</b>	<b>83.2</b>	
<b>TOTAL PAHs</b>	<b>4294</b>	<b>4452</b>	<b>4593</b>	<b>4889</b>	

# Platform Ely



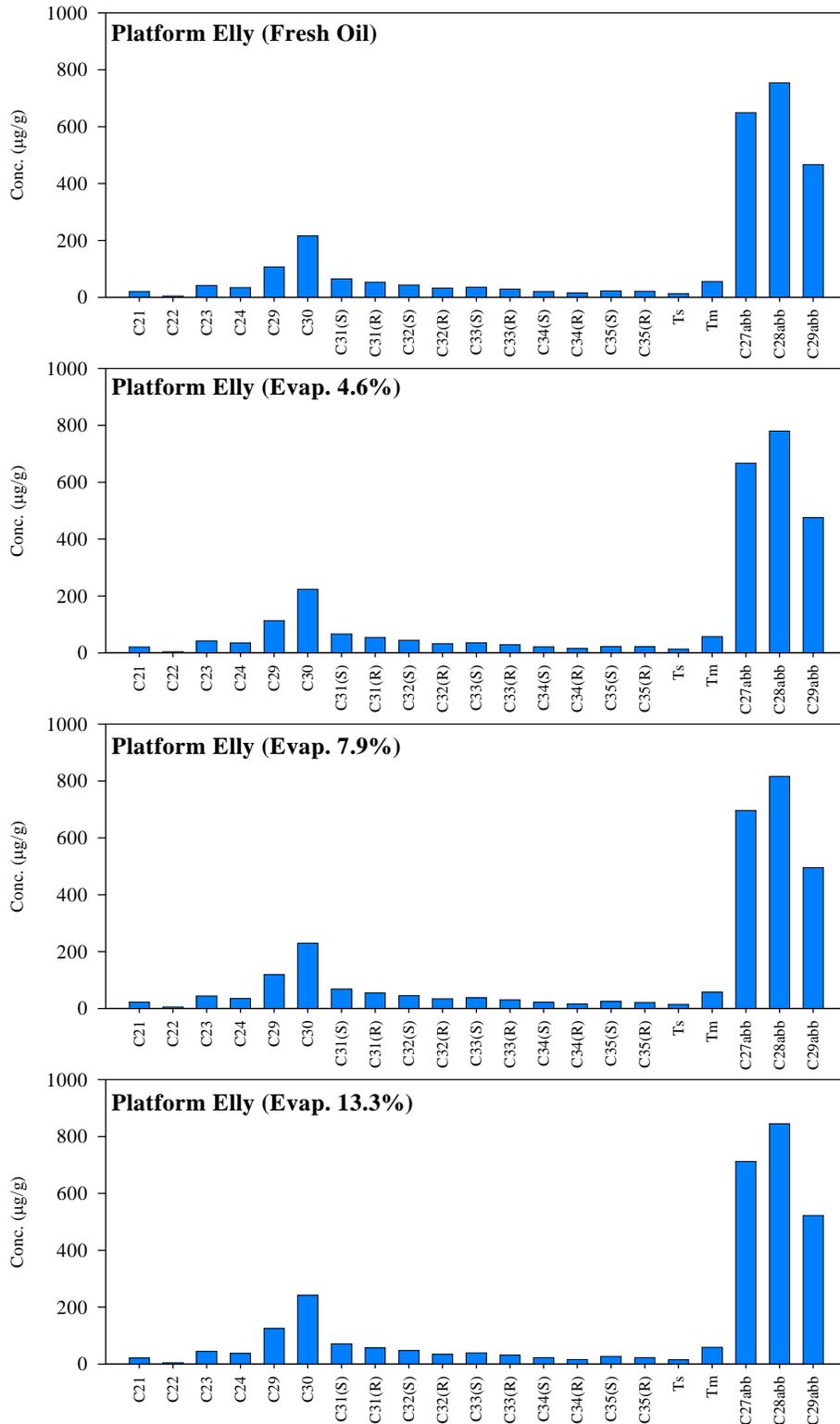
PAH Distributions for Platform Ely

# Platform Elly

## Biomarker Distributions

Biomarker	Platform Elly Concentration ( $\mu\text{g/g}$ oil)			
	0% evap.	4.6% evap.	7.9% evap.	13.3% evap.
C21	20.1	20.9	22.0	21.5
C22	4.32	4.32	4.90	4.82
C23	41.3	42.3	43.6	44.8
C24	33.9	34.8	35.4	37.0
C29 hopane	107	113	119	125
C30 hopane	216	224	229	241
C31(S)	64.6	66.4	68.6	70.7
C31(R)	52.5	53.7	54.5	56.6
C32(S)	43.0	44.0	45.5	47.6
C32(R)	32.2	32.7	33.6	34.4
C33(S)	35.2	35.9	37.5	39.3
C33(R)	28.5	29.0	30.4	31.7
C34(S)	20.0	21.2	21.6	22.8
C34(R)	15.1	15.6	15.8	16.2
C35(S)	22.1	22.4	24.6	26.7
C35(R)	20.9	21.5	20.8	22.7
Ts	13.2	13.4	14.2	14.9
Tm	55.9	56.6	57.2	59.1
C27 $\alpha\beta\beta$ steranes	649	666	696	712
C28 $\alpha\beta\beta$ steranes	754	780	816	845
C29 $\alpha\beta\beta$ steranes	466	475	495	522
<b>TOTAL</b>	<b>2695</b>	<b>2773</b>	<b>2885</b>	<b>2996</b>
C23/C24	1.22	1.22	1.23	1.21
C23/C30	0.19	0.19	0.19	0.19
C24/C30	0.16	0.16	0.15	0.15
C29/C30	0.49	0.50	0.52	0.52
C31(S)/C31(R)	1.23	1.24	1.26	1.25
C32(S)/C32(R)	1.33	1.34	1.35	1.39
Ts/Tm	0.24	0.24	0.25	0.25
C27 $\alpha\beta\beta$ /C29 $\alpha\beta\beta$	1.39	1.40	1.41	1.36
$\Sigma$ (C31 to C35) homohopanes	334	342	353	369
C30/ $\Sigma$ (C31 to C35)	0.65	0.65	0.65	0.65

# Platform Elly



Biomarker Distributions for Platform Elly